

REMARKS

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claims 6, 7 and 13-20 have been cancelled, while claim 1 has been amended to include the limitations of cancelled claims 6 and 7. In addition, claim 12 has been made an independent claim.

The Examiner has rejected claims 1, 2, 4, 6-8 and 12-20 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,436,673 to Bachmann et al. The Examiner has further rejected claims 3, 5, 10 and 11 under 35 U.S.C. 103(a) as being unpatentable over Bachmann et al. in view of U.S. patent 4,731,662 to Udagawa et al. In addition, the Examiner has rejected claim 9 under 35 U.S.C. 103(a) as being unpatentable over Bachmann et al. in view of U.S. Patent 5,742,296 to Yamada et al.

The Bachmann et al. patent discloses video signal color correction based on color hue.

As noted in MPEP §2131, it is well-founded that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1 and 12 include the limitations "obtaining the output saturation parameter value by increasing the input saturation parameter value up to a maximum level" and "determining said maximum level using the input hue value and the output luminance parameter value such that clipping of a color driving value does not take place".

The Examiner has indicated that these limitations are taught by Bachmann et al. "(S.SAT-max value from fig. 8) depend on the hue parameter values-(H)-('673; col 2, ln. 62-68)" and "('673; fig. 7 and 8; output of functional block 44 applied to multiplier functional block 48; '673; fig. 1; col 6, ln. 62-68, col. 7, ln. 1-12".

Applicants submit that the Examiner is mistaken. In particular, Bachmann et al., at col. 2, lines 62-68, states:

"Calculating circuits 6, 7 and 8 are respectively provided for the signals HUE, SAT and Y, in which, respectively, the HUE signal is added to a hue correction signal KORR.HUE while the color saturation signal KORR.SAT and a luminance correction signal KORR.LUM are both multiplied by the respective signals which are to be corrected."

This portion of Bachmann et al. merely states that a correction signal KORR.HUE is added to the hue signal while the input luminance and saturation signal are multiplied by the correction signals KORR.LUM and KORR.SAT, respectively. Further, Bachmann et al., at col. 6, lines 62-68 and col. 7, lines 1-12, states:

"FIG. 7 shows, in the form of a circuit block diagram, an embodiment of the window circuit 26 of FIG. 1. The luminance signal Y and the saturation signal SAT are respectively supplied to circuits 44 and 45 for generation of a window signal W.Y or W.SAT as the case

may be. These circuits in each case produce a signal which is dependent in a manner shown in FIG. 8 from the input signal Y or the input signal SAT as the case may be. For small values of the input signal the output signal is 0. In the region of a first value that can be set, the output signal gradually rises to 1, then remains there until a further transition region is reached which is likewise capable of being set into the system, before sinking back to 0. The setting of the flanks of the signal W.Y or Y.SAT, as the case may be, is indicated by the double-headed arrows in FIG. 8 and is produced by setting in units 46 and 47 of FIG. 7, each of which has a setting element, for example a knob for each of the lower and upper flanks."

Applicants submit that it should be apparent from the above that Bachmann et al. is describing window circuit 26 of Fig. 1, which enables the correction of the hue, saturation and luminance in only specific areas of the display. In particular, the outputs of the window circuit start at zero, rise to one, and then descend back to zero, i.e., when the outputs of the window circuit are one, full correction is enabled, while when the outputs are zero, no correction is allowed.

However, Applicants submit that there is no disclosure or suggestion of the limitations "obtaining the output saturation parameter value by increasing the input saturation parameter value up to a maximum level" and "determining said maximum level using the input hue value and the output luminance parameter value such that clipping of a color driving value does not take place".

The Udagawa et al. patent discloses an image processing method for processing an image signal differently depending on the range of an image characteristic thereof relative to the range

within which an output device can reproduce the image characteristic.

Claim 3 includes the limitation "adapting the power based on histogram data derived from one or more of the input parameter values".

The Examiner has indicated:

"Udagawa, working in the same field of endeavor, teaches a method comprising the step of adapting the power (saturation compression; '662, col.4, ln. 23-45) based on histogram data derived from the input parameter values ('662, col. 4, ln. 5) ('662; fig. 5; col.4, ln. 23-45) for the benefit of providing a method that is able to handle the condition where the density range of color saturation values of an input image signal is broader than the density range of a target output device so that the compression compensation is controlled in a manner to avoid the loss of picture detail because the histogram equalization allows the color saturation to be increased more for picture areas showing low saturation density levels than for picture areas showing high saturation density levels while preventing the overall corrected signal from exceeding the saturation limit or clipping level of the output device."

However, Applicants submit that Udagawa et al. does not supply that which is missing from Bachmann et al., i.e., "obtaining the output saturation parameter value by increasing the input saturation parameter value up to a maximum level" and "determining said maximum level using the input hue value and the output luminance parameter value such that clipping of a color driving value does not take place".

The Yamada et al. patent discloses an image processing method and apparatus therefor.

Claim 9 includes the limitation "the output saturation parameter value is substantially determined by the equation:

$$S' = S_{\max} (S / S_{\max})^{\gamma_h},$$

where S is the saturation parameter value, S_{\max} is the maximum saturation value, and γ_h is the power".

The Examiner has indicated:

"Yamada, working in the same field of endeavor, however, teaches a method for the benefit of preventing over saturation of the S values in the corrected image, wherein a saturation-related output parameter value $S'(Y_0)$ that is substantially determined by the equation: $S' = S_{\max} * (s / S_{\max})^{\gamma_h}$ ($Y_0 = Y_1(1 - (1 - Y_P \setminus Y_T) ** Y_C$ $Y_1)$ ('296; col. 6, ln. 63-67, col. 7, ln. 1-2) where all the gamma values (saturation) are normalized to the value of 1 so that the form of this equation becomes the form of the instant application. In addition, y_t corresponds to S, y_p corresponds to S_{\max} and y_j is approximately equal to S_{\max} ('296; col. 6, ln. 25-45)."

However, Applicants submit that Yamada et al. does not supply that which is missing from Bachmann et al., i.e., "obtaining the output saturation parameter value by increasing the input saturation parameter value up to a maximum level" and "determining said maximum level using the input hue value and the output luminance parameter value such that clipping of a color driving value does not take place".

In view of the above, Applicants believe that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicants believe that this application, containing claims 1-12, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

by /Edward W. Goodman/
Edward W. Goodman, Reg. 28,613
Attorney
Tel.: 914-333-9611